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fort, in favor of it. The latter exhibited standard text-books on zoology, and grew quite excited as he quoted evolutionary statements from them.

A representative, whose vote against the bill made it a tie, called up his pastor by long distance telephone, while the balloting was yet in progress, and asked for advice as to how to cast his final vote.

The representative from Breathitt County, one of the counties of the mountain section, where anti-evolution sentiment is strong, surprised everybody by voting against the bill; indeed it was he who cast the deciding ballot. This county is known as "Bloody Breathitt," because of its distinctive lead in homicides growing out of private feuds. This member can scarcely be said to represent the sentiment on evolution in this county, which has an illiteracy of 21.6 per cent. It is doubtless more correctly represented by the editor of the *Jackson News* of that county, who recently said, "The professors at the state university may believe they are descended from apes and baboons, but let it be known that the good people of Breathitt are pure Anglo-Saxon."

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### ROTERTIA

In the mind of the student the word "moment" is unalterably connected with the idea of a very short space of time. Such an expression as "moment of force" is, therefore, on the face of it, meaningless. It is useless for the teacher to point out that "moment" also means importance, and that the moment of a force is merely its importance or effectiveness in producing rotation. Calling it a "moment of force" makes "a tendency to produce rotation" a difficult physical conception for the student to grasp. This difficulty has been recognized by teachers of physics, who have at last very generally discarded the expression "moment of force," in favor of the shorter, simpler, and clearer term "torque." A torque is a twist. There you have the whole thing in

a nut-shell, and the student knows what you are talking about.

Why not keep up the good work by accepting suitable substitutes for "moment of momentum" and "moment of inertia" as well? If "moment of force" is bad, these are worse. Some text-book writers have already seen the wisdom of using "angular momentum" for "moment of momentum." This is a distinct improvement, since "angular momentum" carries its meaning on its face. But so far I have failed to find any serious attempt made to use a substitute for "moment of inertia," although, to my mind, this is the worst offender of the three. The magnitude of a moment of force is calculated by multiplying a force by a distance ( $f \times r$ ); similarly that of a moment of momentum by multiplying a momentum by a distance ( $mv \times r$ ); but the magnitude of a moment of inertia is *not* equivalent to the product of an inertia times a distance ( $m \times r$ ), but times the square of a distance ( $m \times r^2$ ). The use of the word "moment" in all three cases, therefore, misleads the student to expect an analogy which does not exist in the case of moment of inertia, thus making the term particularly inappropriate. My experience has been that the word "rotertia" immediately conveys to a student the physical conception buried in the expression "moment of inertia"; and in such a way that it is not easily forgotten. I therefore seriously urge its adoption. "Roter-tia" on the face of it is equivalent to rotational inertia; and, hybrid though its stock may be, what more can we demand of a technical term than unambiguity, clarity, and force?

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### THE VALUE OF TILTH IN AGRICULTURE

DR. JEROME ALEXANDER (in *SCIENCE*, February 10, 1922) criticises a statement made by the present writer (*SCIENCE*, September 2, 1921) that "the comminution of the surface of the soil, *more or less perfectly stops evaporation and thus conserves the store of soil water.*" This statement is said by Dr. Alexander to be "quite contrary to all engineering